

# MRI SYSTEM WITH LIQUID COOLED RF SPACE

## Abstract

A radio frequency space cooling system (11) for a magnetic resonance imager system (10) includes a thermal energy transfer device (78). The energy transfer device (78) reduces the temperature of a cooling fluid (86) within the cooling system (11). A cooling element (82) is coupled to the energy transfer device (78) and extends along a patient bore (15) between a radio frequency shield (22) and a radio frequency coil (20) of the magnetic resonance imager system (10). The cooling element (82) has a channel (90) for passage of the cooling fluid (86).